SECTION 10 71 13.13

HURRICANE SHUTTERS AND STORM PANELS

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\*\* NOTE TO SPECIFIER \*\* AMD Supply LLC; Storm & Security Protection Products.
This section is based on the products of AMD Supply LLC, which is located at:2001 W. Government St.Pensacola, FL 32502Tel: 850-432-2485Fax: 850-474-6554Email: [request info (salespen@amdaluminum.com)](https://arcat.com/rfi?action=email&company=AMD%252BSupply%252BLLC&message=RE%253A%2520Spec%2520Question%2520(10710fbp)%253A%2520&coid=51145&spec=10710fbp&rep=&fax=850-474-6554)
Web: <https://amdaluminum.com>
 [ [Click Here](https://arcat.com/company/amd-supply-llc-51145) ] for additional information.
FBP offers our patented StormSecure line of Impact and Non-Impact Louvered Bahama and Colonial Shutters, as well as our Louverlite Decorative Louvered Shutter Products. We manufacture and distribute Impact Board & Batten Colonials, Fullview Articulating Blade Impact Bahamas, 6.8 Eyewall Armor Accordion Shutters, and our 44mm & 56mm Rolling Shutters - available in manual and motor operated versions. We are also proud to offer the Crimsafe line of Hurricane and Security Screen Systems.
Fortified also carries a complete line of Storm Panel Products, Custom Aluminum Fabrication, and Premium Powdercoating through our in-house, state of the art facility. No one offers a better line of quality products, nor the customer service to back them up.
We've assembled a team of industry professionals that few can compete with for knowledge of our industry and years of experience to rely on. We invite you to join the Fortified Team of Quality Storm Protection Providers and be a part of our steady growth in the industry.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Louvered products as listed below:
			1. Storm Secure Impact Bahama Shutter(1-1/2 inch Multi-Cell Louver)
			2. Storm Secure Impact Colonial Shutter (1-1/2 inch Multi-Cell Louver)
			3. HD Deco Bahama Shutter (1-1/2 inches Hollow Louver)
			4. HD Deco Colonial Shutter (1-1/2 inches Hollow Louver)
			5. LouverLite Bahama Shutter (2 inches "Z" Profile Louver)
			6. LouverLite Colonial Shutter (2 inches "Z" Profile Louver)
			7. Deco Bahama Shutter (2 inches Hollow Louver)
			8. Deco Colonial Shutter (2 inches Hollow Louver)
			9. 2 inch (50 mm) Airfoil Bahama Shutter (2 inches Hollow "Oval" Louver)
			10. 2 inch (50 mm) Airfoil Colonial Shutter (2 inches Hollow "Oval" Louver)

\*\* NOTE TO SPECIFIER \*\* "Can see directly through in between blades"

* + - 1. ViewThru Bahama Shutter (1-1/4 inches Hollow Louver)

\*\* NOTE TO SPECIFIER \*\* This blade can be fully open to see through or completely closed making it weather resistant

* + - 1. Full View 2 Inch Articulating Bahama Shutter (Operable Blade)

\*\* NOTE TO SPECIFIER \*\* This blade can be fully open to see through or completely closed making it weather resistant

* + - 1. Full View 2 Inch Articulating Fixed Louvered Panel (2 inches Articulating / Operable Blade)

\*\* NOTE TO SPECIFIER \*\* This blade can be fully open to see through or completely closed making it weather resistant

* + - 1. Ultra-View 4 Inch Articulating Bahama Shutter (4 inches Articulating / Operable Blade)

\*\* NOTE TO SPECIFIER \*\* This blade can be fully open to see through or completely closed making it weather resistant

* + - 1. Ultra-View 4 Inch Articulating Fixed Louvered Panel (4 inches Articulating / Operable Blade)
			2. Aluminum Storm Panel - Eye Wall Armor 2 Inch Deep x 0.050 inch Aluminum (Thickness) Storm Panel
			3. Galvanized Steel Storm Panel - Eye Wall Armor 2 Inch Deep x 24 Gauge (Thickness) Storm Panel
			4. UltraClear Lexan Storm Panel - "UltraClear" 2 Inch Deep x 0.093 inch Lexan (Thickness) Storm Panel
			5. Accordion Shutter - Supernova Impact Accordion Hurricane Shutter
			6. Accordion Shutter - Eye Wall Armor 6.8 Slim Line
			7. Rolling Shutter - Eye Wall Armor 44mm Extruded Aluminum -End Retention (Roll-Up Shutter - 44 mm Blade)
			8. Rolling Shutter - Eye Wall Armor 56mm Extruded Aluminum End Retention (Roll-Up Shutter - 56 mm Blade)
			9. Rolling Shutter - Fortified 58mm Aluminum End Retention ( Roll up Shutter - 58 mm Blade )
			10. Over Head Aluminum Canopy - Aluminum Frame & Aluminum Deck Commercial Cover
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 04 20 00 - Unit Masonry. For rough opening and reinforcement required for installation of shutters.
		2. Section 06 10 00 - Rough Carpentry. For rough opening and blocking required for installation of shutters.
		3. Section 08 51 13 - Aluminum Windows. For coordination of shutter installation.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
		2. AAMA 2604/05 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels; 1998.
		3. Florida Building Code.
		4. Texas Building Code.
		5. Metro-Dade County, FL Building Code Compliance Office Protocol:
			1. TAS 201 - Impact Test Procedures.
			2. TAS 202 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure.
			3. TAS 203 - Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings: Elevations, sections and details representing fabrication and installation.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
		3. Operating and maintenance data.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
		2. Installer Qualifications: Minimum 2 year experience installing similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship is approved by Architect.
			3. Refinish mock-up area as required to produce acceptable work.
	1. PRE-INSTALLATION MEETINGS
		1. Convene minimum two weeks prior to starting work of this section.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
		2. Handling: Handle materials to avoid damage.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. SEQUENCING
		1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
	5. WARRANTY

\*\* NOTE TO SPECIFIER \*\* This warranty covers materials and workmanship for the ten-year period, and up to ten years on the powder coat finish of our louvered products, rolling shutter and accordion products, with a factory paint finish, carry a five-year finish warranty.

* + 1. Manufacturer's Warranty: Fortified Building Products, Inc., a Florida corporation, shall provide a ten-year product warranty on its complete line of Bahama, colonial, accordion, and rolling shutter products.
			1. Finish Warranty: Standard 3-year warranty on TGIC powder coat finishes.
			2. Finish Warranty: 5-year warranty on products with a primer coat pretreat and super durable powder coat finish.
			3. Finish Warranty: 7-year warranty on products with a Kynar or AAMA 2605 powder coat finish.
		2. The warranty does not apply to parts which have been subjected to misuse, neglect, damage by fire, floods, or acts of god or from damage resulting from improper customer maintenance. In no event shall Fortified Building Products, Inc. be held liable for damages resulting from improper installation, freight damages, or any incurred damage outside the standard used of said product. All shutter products shall be properly secured during severe weather conditions. At no time shall any warranty claim exceed the original purchase price of said product.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: AMD Supply LLC, which is located at:2001 W. Government St.Pensacola, FL 32502Tel: 850-432-2485Fax: 850-474-6554Email: [request info (salespen@amdaluminum.com)](https://arcat.com/rfi?action=email&company=AMD%252BSupply%252BLLC&message=RE%253A%2520Spec%2520Question%2520(10710fbp)%253A%2520&coid=51145&spec=10710fbp&rep=&fax=850-474-6554);Web: <https://amdaluminum.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. BAHAMA SHUTTERS

\*\* NOTE TO SPECIFIER \*\* The StormSecure Line of Impact Bahama Shutters offers the latest styling and test proven durability on the market today. Our Bahama Shutters are designed with the low profile look of traditional wooden shutters, coupled with the strength and durability of Aluminum. Available in a vast array of colors, our Bahama Louvered Shutters will compliment any home, business, or commercial project with unsurpassed quality and affordability. Our system has been installed on homes and commercial facilities worldwide where Hurricane and Typhoon Winds are a real threat. StormSecure Hurricane & Typhoon Shutters ™ The Industry Standard
Florida Building Code - High Velocity Hurricane Zone, Texas Dept. of Insurance, TAS 201, TAS 202, TAS 203, ASTM E1886, ASTM E1996, ASTM E330 Approvals.
Patented Design ™ U.S. Patent # 7,677,003
Interior or Exterior Sliding Pinlatch Option; The Tropical Look; Protection from the Sun; Protection from Mother Nature™s Assault; Adds the Three-Dimensional Look; Added Privacy; The Latest in Architectural Design; 1.5 inch Blade Design - The Traditional Look

* + 1. Series: Bahama Shutters - StormSecure (HVHZ Hurricane Rated):
			1. Product: Storm Secure "Large" Impact Bahama Shutter (1-1/2 inches (38 mm) Multi-Cell Louver).
				1. Performance:

Maximum Frame Dimension: 96 inches x 96 inches (2438 mm x 2438 mm).

Design Pressure (PSF): 50 positive and 55 negative.

* + - * 1. Compliance:

State of Texas structural requirements for large missile impact protective system for installation in Seaward, Inland I and Inland II areas. Product meets missile level "D" and Wind Zone 4 as defined in ASTM E1996

* + - 1. Product: Storm Secure Impact Bahama Shutter (1-1/2 inches (38 mm) Multi-Cell Louver).
				1. Performance:

Maximum Frame Dimension: 96 inches x 96 inches (2438 mm x 2438 mm).

Design Pressure (PSF): 50 positive and 55 negative.

* + - * 1. Compliance:

Florida Building Code 2010 structural requirements with "High Velocity Hurricane Zone" (HVHZ).

State of Texas structural requirements for large missile impact protective system for installation in Seaward, Inland I and Inland II areas. Product meets missile level "D" and Wind Zone 4 as defined in ASTM E1996

* + - 1. Product: Storm Secure Impact Bahama Shutter (1-1/2 inches (38 mm) Multi-Cell Louver).
				1. Performance:

Maximum Frame Dimension: 57 x 88 inches (1448 x 2235 mm).

Design Pressure (PSF): 80 positive and 80 negative.

* + - * 1. Compliance:

State of Texas structural requirements for large missile impact protective system for installation in Seaward, Inland I and Inland II areas. Product meets missile level "D" and Wind Zone 4 as defined in ASTM E1996

* + - 1. Product: HD Decorative Bahama Shutter (1-1/2 inches (38 mm) Hollow Louver).
				1. StormSecure Non-Impact Decorative Bahama Shutters.

\*\* NOTE TO SPECIFIER \*\*Delete blade type not required.

* + - * 1. Blade: Standard 1.5 inches (38 mm) Hollow Blade.
				2. Blade: 2 inches (52 mm) Hollow Blade.

\*\* NOTE TO SPECIFIER \*\* Most affordable in our line of Bahama Shutter Products. Constructed of extruded aluminum, coupled with a lightweight frame system, this system offers the look of conventional louvered bahama shutters, in a non-impact system that is compatible with any budget.

* + - 1. Product: Louver Lite Bahama Shutter.
				1. Blade: 2.25 inches (57 mm) "Z" Blade profile system.
			2. Product: Decorative Bahama Shutter (2 inches (52 mm) Hollow Louver).
				1. StormSecure Non-Impact Decorative Bahama Shutters.

\*\* NOTE TO SPECIFIER \*\*Delete blade type not required.

* + - * 1. Blade: Standard 1.5 inches (38 mm) Hollow Blade.
				2. Blade: 2 inches Hollow Blade.
			1. Product: 2 inches (52 mm) Airfoil Bahama Shutter (2 inches (52 mm) Hollow "Oval" Louver).

\*\* NOTE TO SPECIFIER \*\* "Can see directly through in between blades"

* + - 1. Product: ViewThru Decorative Bahama Shutter (1-1/4 inches (32 mm) Hollow Louver).

\*\* NOTE TO SPECIFIER \*\* This blade can be fully open to see through or completely closed making it weather resistant

* + - 1. Product: Eyewall Armor Full View Bahama Shutter System (2 inches (52 mm) Articulating / Operable Blade).
				1. Florida Building Code HVHZ with large missile standard and Texas Dept. of Insurance test requirements for strength and durability.

\*\* NOTE TO SPECIFIER \*\* This blade can be fully open to see through or completely closed making it weather resistant

* + - 1. Product: Ultra-View 4 inches (102 mm) Articulating Bahama Shutter (4 inches (102 mm) Articulating / Operable Blade).
				1. Florida Building Code HVHZ with large missile standard and Texas Dept. of Insurance test requirements for strength and durability.
		1. Design:

\*\* NOTE TO SPECIFIER \*\* Delete louver design not required.

* + - 1. Impact Bahama Shutter is a heavy duty louvered panel, hinged at the top of the outer frame, and operated with adjustable or fixed arms attached to the structure and at the side frame of the panel. The louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
			2. Non - Impact View Thru Bahama Shutter is a heavy duty louvered panel, hinged at the top of the outer frame, and operated with adjustable or fixed arms attached to the structure and at the side frame of the panel. The louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
			3. Non - Impact Decorative Bahama Shutter is a heavy duty louvered panel, hinged at the top of the outer frame, and operated with adjustable or fixed arms attached to the structure and at the side frame of the panel. The louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
			4. The Non - Impact Decorative Colonial Shutter is attached at the side of the outer frame and folds inwardly to meet with an adjacent panel for coverage of the window opening. The louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
			5. The Louverlite Bahama Shutter is a lightweight louvered panel, hinged at the top of the outer frame, and operated with adjustable or fixed arms attached to the structure and at the side frame of the panel. The Louverlite Louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
		1. Construction: Louvered Shutters: Extruded Aluminum; box beam frame with extruded louvers interlocking into frame.
			1. Size and Configuration: As indicated on drawings.
			2. Constructed to withstand 30 psf positive and negative wind pressure without damage or failure of anchors. Provide intermediate louver supports and frame reinforcing as required.
			3. Frame: 0.060 inch (1.53 mm) thick aluminum; 2 inches (52 mm) wide by 1-1/4 inches (32 mm); interior channels filled with high-temperature industrial adhesive to retain louvers.

\*\* NOTE TO SPECIFIER \*\* Delete louver not required.

* + - 1. Louver: Extruded aluminum Impact - multi-hollow; 0.050 inches (1.25 mm) thick, 1-1/2 inches (38 mm) wide, with full radius edges, spaced at 1-1/4 inches (32 mm).
			2. Louver: Extruded Aluminum HD Decorative - Single Hollow; 0.050 inches (1.25 mm) thick, 1-1/2 inches (38 mm) wide, with full radius edges, spaced at 1-3/8 inches (35 mm).
			3. Louver: Extruded Aluminum LouverLite Solid 0.050 / 0.093 inches (1.25 mm/2.36 mm) thick, 2-1/4 inches (57 mm) wide, with full radius edges, spaced at 2-1/4 inches (57 mm).
			4. Louver: Extruded aluminum Non-impact - approx. 1.25 inches (32 mm) in length with a wall thickness of .050 inch (1.27 mm), and a hollow, oval shaped slat.
			5. Bahama Style Shutters: Continuous reversible extruded aluminum hinge header at top with anchors; mounting as indicated on drawings.
				1. Arms attached to brackets on back of shutter and camelbacks on sill or wall.
				2. Telescoping arms, for projection up to 44 degrees.

\*\* NOTE TO SPECIFIER \*\* insert degree required. Consult manufacturer for available construction.

* + - * 1. Fixed length arms, for projection of \_\_\_\_ degrees.
				2. Arms removable and latches for securing shutter in closed position.
				3. Screw tie-down brackets and wall anchors as required for wind resistance.
			1. Frame and Louver Finish: Electro-statically applied, modified acrylic/polyester enamel powder over pre-treated aluminum, cured at 400 degrees F (204 degrees C).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. COLONIAL SHUTTER

\*\* NOTE TO SPECIFIER \*\* The StormSecure Colonial System features the look of traditional colonials, found in historic regions throughout the United States. The 1.25" Blade offers the look of historic wooden shutters yet constructed of aluminum and offering exceptional protection from Hurricane or Typhoon conditions. The StormSecure Colonial System allows excellent airflow, in the closed position, allowing for protection without giving up ventilation in the process. Our system can be closed from the inside or outside of the home, giving the customer the option of architectural appeal and ease of operation.

* + 1. Colonial Shutters are self storing, so closure in adverse weather conditions is quick and extremely effective. Enhance the look of your home or office, while providing outstanding protection when Nature releases its furious winds. StormSecure Colonial Shutters the perfect blend of styling and performance. Easy to operate; Optional pinlatch system; The traditional, historic look; Outstanding design pressure ratings; Low profile frame system; Available in a vast array of powdercoat finishes
			1. Series: Colonial Shutter.
				1. Product: Storm Secure Impact Colonial Shutter (1-1/2 inches (38 mm) Multi-Cell Louver).

Performance:

Maximum Frame Dimension: 38-1/2 x 80 inches (978 x 2032 mm). 19.25 inches (489 mm) wide single unit.

Design Pressure (PSF): 100 positive and 100 negative.

Compliance:

State of Texas structural requirements for large missile impact protective system for installation in Seaward, Inland I and Inland II areas. Product meets missile level "D" and Wind Zone 4 as defined in ASTM E1996

* + - * 1. Product: Storm Secure Impact Colonial Bi-fold Shutter (1-1/2 inches (38 mm) Multi-Cell Louver).

Performance:

Maximum Frame Dimension: 77 inches x 88.87 inches.

\*\* NOTE TO SPECIFIER \*\* Delete latch performance not required.

Design Pressure (PSF) - Pin Latch: 65 positive and 65 negative.

Design Pressure (PSF) - Z Clip Latch: 80 positive and 90 negative.

Compliance:

State of Texas structural requirements for large missile impact protective system for installation in Seaward, Inland I and Inland II areas. Product meets missile level "D" and Wind Zone 4 as defined in ASTM E1996

* + - * 1. Product: HD Decorative Colonial Shutter (1-1/2 inches (38 mm) Hollow Louver).

Impact ratings not tested or verified.

\*\* NOTE TO SPECIFIER \*\* May be added with an upgrade charge. Delete if not required.

Provide Storm bars.

* + - * 1. Product: LouverLite Colonial Shutter (2 inches (52 mm) "Z" Profile Louver).

2.25 inches (57 mm) "Z" Blade profile system.

Impact and storm ratings not tested or verified.

\*\* NOTE TO SPECIFIER \*\* May be added with an upgrade charge. Delete if not required.

Provide Storm bars.

* + - * 1. Product: Decorative Colonial Shutter (2 inches (52 mm) Hollow Louver).

Impact ratings not tested or verified.

\*\* NOTE TO SPECIFIER \*\* May be added with an upgrade charge. Delete if not required.

Provide Storm bars.

* + - * 1. Product: 2 Inches Airfoil Colonial Shutter (2 inches (52 mm) Hollow "Oval" Louver).
		1. Design:

\*\* NOTE TO SPECIFIER \*\* Delete design not required.

* + - 1. The Impact Colonial Shutter is attached at the side of the outer frame and folds inwardly to meet with an adjacent panel for coverage of the window opening. The louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
			2. The View Thru Colonial Shutter is attached at the side of the outer frame and folds inwardly to meet with an adjacent panel for coverage of the window opening. The louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
			3. The Non - Impact Deco Colonial Shutter is attached at the side of the outer frame and folds inwardly to meet with an adjacent panel for coverage of the window opening. The louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
			4. The Louverlite Colonial Shutter is attached at the side of the outer frame and folds inwardly to meet with an adjacent panel for coverage of the window opening. The Louverlite Louvered panels are comprised of extruded 6063 T-6 Aluminum, with a high quality powder coat finish.
		1. Construction: Louvered Shutters: Extruded Aluminum; box beam frame with extruded louvers interlocking into frame.
			1. Size and Configuration: As indicated on drawings.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. ACCORDION SHUTTERS

\*\* NOTE TO SPECIFIER \*\* We are proud to offer the Eyewall Armor 6.8 Accordion Shutter System - in our opinion, the finest accordion shutter system on the market today. With the 6.8 Accordion System, corrosion is not an option. The assembly screws can be easily lubricated, ensuring continuous and reliable operation and protection when you need it most. The finish on the 6.8 system is the finest in the industry and the system offers the only two-step locking process in the industry. The system stacks tightly, so you maintain the clean look of your home or office.
The Eyewall Armor Accordion Shutter, manufactured by Fortified Building Products, is proof that all accordion shutters are not the same. The Eyewall Armor 6.8 Accordion System; Quiet, trouble-free operation; Tight stack for cosmetic appeal and less obstruction; No lock rods or devices required; High quality paint finish; Florida Building Code HVHZ and non-HVHZ approvals; Texas Department of Insurance approved; Available in Bronze, White, Ivory or Beige; Rolling Shutters

* + 1. Accordion Shutters - Eyewall Armor
			1. Product: Accordion Shutter - Eye Wall Armor 6.8 Slim Line
			2. Performance:
				1. Lock rods or auxiliary devices not permitted.

\*\* NOTE TO SPECIFIER \*\* Delete compliance not required.

* + - 1. Compliance: HVHZ - Miami-Dade County and Broward County Florida.
			2. Compliance: HVHZ - ESSENTIAL BUILDINGS Miami-Dade County and Broward County Florida.
			3. Compliance: Non-HVHZ - All locations other than Miami-Dade County and Broward County Florida.
		1. Accordion Shutters - Supernova
			1. Product: Accordion Shutter - SuperNova Impact Accordion
			2. Performance - Constructed and erected to provide protection from hurricane force winds and windborne debris.
			3. Compliance: HVHZ - Miami-Dade County and Broward County, Florida.
			4. Compliance: Non-HVHZ - All locations other than Miami-Dade County and Broward County, Florida.
			5. Impact Resistant ( Level D ) - Large and Small Missile - ASTM e330, E1996, TAS 201, TAS 202, TAS 203, ASCE 7-16, ADM-15, NDS-18

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. ROLLING SHUTTERS

\*\* NOTE TO SPECIFIER \*\* Rolling Shutters are the most convenient of our full range of Hurricane / Security Shutter Systems. Available in 56mm End-Retention or 44mm Non-retention systems, our rolling shutters offer excellent protection from the elements. Available in an array of colors, our rolling shutters can be controlled manually, or with electric motors with switches or remote control. Using the latest in rolling shutter technology, our systems meet the latest Building Code Requirements for wind loads and impact ratings. If you are looking for a rolling shutter system to withstand nature™s onslaught during Hurricane or Typhoon force conditions, look no further than the Fortified Building Products line of quality Rolling Shutter Products.
Florida Building Code ( 2010 ) and Texas Dept. of Insurance Approved
Meets the latest lab test requirements: ASTM E-1886, ASTM E-1996, ASTM E-33, TAS 201, TAS 202, TAS 203
Available in White, Bronze, Ivory, or Beige ( \* custom powder coated housing available upon request )
Electric motor ( switch or remote control ) and manual operators available.

* + 1. Finish:

\*\* NOTE TO SPECIFIER \*\* Delete color not required.

* + - 1. Finish Color: White.
			2. Finish Color: Bronze.
			3. Finish Color: Ivory.
			4. Finish Color: Beige.
			5. Finish Color: Custom powder coated housing available upon request.
		1. Operation:

\*\* NOTE TO SPECIFIER \*\* Delete operation not required.

* + - 1. Electric motor (switch or remote control).
			2. Manual operator.
		1. Compliance:
			1. Florida Building Code 2020 and Texas Dept. of Insurance Approved.
			2. Meets the latest lab test requirements: ASTM E-1886, ASTM E-1996, ASTM E-33, TAS 201, TAS 202, TAS 203
		2. Series: Fortified Building Products Aluminum Rolling Shutters
			1. Product: Rolling Shutter - Eye Wall Armor 44 mm Extruded Aluminum End Retention (Roll-Up Shutter - 44 mm Blade)
			2. Product: Rolling Shutter - Fortified Aluminum 58mm End Retention (Roll-Up Shutter - 58 mm Blade)
			3. Product: Rolling Shutter - Eye Wall Armor 56 mm Extruded Aluminum End Retention (Roll-Up Shutter - 56 mm Blade)

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. STORM PANELS

\*\* NOTE TO SPECIFIER \*\* Optical grade polycarbonate for maximum clarity. The clearest storm panel system on the market. Lightweight design and laboratory tested to meet stringent building code guidelines for storm protective devices. Our system offers a UV protective coating on both sides of the panel, allowing years of protection without color change or distortion. The system is designed for direct mounting or with industry standard headers and tracks and can be coupled with other approved panel systems. Lightweight, affordable protection™ with a view. Delete if not required.

* + 1. Series: Fortified UltraClear Storm Panel System.
			1. Product: UltraClear Lexan Storm Panel - "UltraClear" 2 inches (52 mm) Deep x 0.093 inch (2.36 mm) Lexan (Thickness) Storm Panel.
			2. Performance:

\*\* NOTE TO SPECIFIER \*\* Delete mounting not required.

* + - * 1. Direct Mount Fastened Both Ends: 25 psf at 135 inches (3429 mm) to 75 psf at 60 inches (1524 mm).
				2. Direct Mount Fastened One End: 22 psf at 102 inches (2591 mm) to 60 psf at 60 inches (1524 mm).
			1. Compliance:
				1. Florida Building Code. Not engineered for HVHZ (Miami-Dade/ Broward Counties).
				2. May be installed in wind zone 4 (FBC) and essential facilities in wind zones 1, 2, 3 and 4 with storm bars.

\*\* NOTE TO SPECIFIER \*\* The 24 gauge galvanized storm panel system provides excellent protection from the fury of the storm, at an extremely affordable price. Unlike various fabric products, hard panels provide substantial protection from flying objects, allowing protection without sacrificing your windows. Our panel system can be installed with direct mount hardware, or with headers for quicker installation and removal. When your budget is tight, you can protect your home, knowing you are giving your glass a chance to weather the storm. Our panel system is lightweight, stacks tightly, requiring minimum storage space, and can be reused as often as necessary - unlike plywood alternatives. Laboratory tested and building code approved. Delete if not required.

* + 1. Series: Storm Panels.
			1. Product: Eye Wall Armor 2 inches (52 mm) Deep x 0.050 inch (1.27 mm) Aluminum (Thickness) Storm Panel.
				1. Compliance: Florida Building Code. Not engineered for HVHZ (Miami-Dade/ Broward Counties).
				2. The .050 Aluminum Panel System allows the option of meeting the High Velocity Hurricane Zone standard with proper fastening, and can be installed with direct attachment, or with Headers and tracks.
			2. Product: Eye Wall Armor 2 inches (52 mm) Deep x 24 Gauge Galvanized Steel (Thickness) Storm Panel
				1. Compliance: FBC Missile Level "D" and wind zone 3.

Product is not air permeable and therefore a minimum spacing between panel and glazing is not required. Facture of glazing is acceptable with this product.

* + - * 1. Material: 24 gage grade 40, G60 structural steel with galvanized coating.
			1. Product: Full View 2 inches (52 mm) Articulating Fixed Louvered Panel (2 inches (52 mm) Articulating / Operable Blade)

\*\* NOTE TO SPECIFIER \*\* Delete design not required.

* + - * 1. Design: Single Panel span.
				2. Design: Multi Panel span.
				3. Compliance: HVHZ and Non-HVHZ.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. CUSTOM FABRICATIONS

\*\* NOTE TO SPECIFIER \*\* Custom Barriers, Railing Systems, Gates, Heavy Duty Louver Systems - with and without screen backings, and more. Serving clients throughout the United States and the Caribbean region. From CAD design to fabrication and welding, to state of the art powdercoated finishes, our custom designs are built to meet any architectural need.

* + 1. Fortified Building Products offers a full line of Custom Fabricated Aluminum Products.
			1. Over Head Aluminum Canopy - Aluminum Frame & Aluminum Deck Commercial Cover

\*\* NOTE TO SPECIFIER \*\* This blade can be fully open to see through or completely closed making it weather resistant

* + - 1. Product: Ultra-View 4 inches (102 mm) Articulating Fixed Louvered Panel (4 inches (102 mm) Articulating / Operable Blade).
	1. FINISHES

\*\* NOTE TO SPECIFIER \*\* Delete performance levels not required.

* + 1. Performance: Per AAMA Specifications for shop-applied coatings.
		2. Finish: Provide AAMA 2603 finish in color specified.
		3. Finish: Provide AAMA 2604 finish in color specified.
		4. Finish: Provide AAMA 2605 finish in color specified.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions, approved submittals an in proper relationship with adjacent work.
		2. Test for proper operation and adjust until satisfactory results are achieved.
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.
	5. PRODUCT MAINTENANCE AND USE
		1. Proper maintenance measures shall be taken to ensure a long life for the shutter product. The following cleaning conditions shall be met to qualify for product warranty consideration:
			1. Documented cleaning, two times per calendar year.
			2. Mild alkaline detergent and clean water wash.
			3. Effect may be increased by rubbing with a soft, non-scratch cotton cloth.
			4. Temperature of parts should not exceed 80f during cleaning.
			5. Use only isopropyl alcohol for removal of grease or oily substances.
			6. Cleaning solution must not be allowed to react for more than one hour.
			7. After cleaning, all surfaces should be thoroughly rinsed with clean, cold water.
			8. Accordion and rolling shutters should be thoroughly cleaned and lubricated yearly to maintain smooth, trouble free operation.

END OF SECTION